BS

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,098	08/23/2001	Chris P. McIntosh	A-65029 / MSS/WEN	9835

7590 10/22/2004

FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP
Suite 3400
Four Embarcadero Center
San Francisco, CA 94111-4187

EXAMINER	
NGUYEN, TU X	
ART UNIT	**PAPER NUMBER**
2684	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/938,098	MCINTOSH ET AL.	
	Examiner	Art Unit	
	Tu X Nguyen	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments with respect to claims 1 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 7-13 and 16-19, are rejected under 35 U.S.C. 103(a) as being unpatentable over by Fletcher et al. (US Reg. H1836) in view of Feurerstein et al. (US Patent 6,141,565).

Regarding claim 1, Fletcher et al. disclose a distributed cellular communication system comprising:

a network (100, fig.1);

a public switched telephone network (PSTN) coupled to the network (106, fig.1);

a plurality of transceiver (102) coupled to the network, the plurality of transceivers geographically separated form one another and each configured to communicate over a wireless medium with mobile stations (110) in an associated cell (see col.5 lines 17-52);

at least on data processing system coupled to the network, the at least one data processing system configured to execute computer programs including software

functional blocks adapted to enable the plurality of transceivers to communicate data between mobile stations and between a mobile station and the PSTN, the software functional blocks (see col. 7 lines 30-44 and col.9 lines 15-24) including:

a mobility management (MM) functional block to implement MM functions (see col.23 lines 41-42));

a visitor location registry (VLR) functional block to implement VLR functions (see 502, 612, fig.6);

a communication management (CM) functional block to implement CM functions (see col.23 lines 35-41); and

a plurality of radio resources function blocks to implement RR functions including maintaining communication between a mobile station and the network by switching communication among the plurality of transceivers as the mobile station moves from one cell to another cell (see col.23 line 64 through col.24 line 5 and col.6 lines 14-15).

Fletcher et al. fail to disclose communication traffic among the transceivers and the software functional blocks is load-balanced.

In the same field of endeavor, Feuerstein et al. disclose communication traffic among the transceivers and the software functional blocks (see col.4 lines 3-5 and fig.3) is load-balanced (see col.2 lines 37-40) to provide increased efficiency. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fletcher et al. with the above teaching of Feurerstein et al. in order to provide optimization of network parameters based on dynamic

communication and network conditions such as traffic load and balancing conditions and/or changing interference conditions.

Regarding claim 10, Fletcher et al. disclose a distributed cellular network for providing wireless communication with a plurality of mobile stations, comprising:

a plurality of base transceiver station network elements configured to communicate with the plurality of mobile stations over a wireless medium, wherein each base transceiver station includes a network interface adapted to couple to a network (see col.5 lines 17-25);

a plurality of base station controller network elements each including a network interface adapted to couple to the network (see col.21 lines 45-65);

at least one mobile station controller network element including a network interface adapted to couple to the network (see col.21 lines 20-21);

Fletcher fail to disclose communication traffic among the base transceiver stations, the base station controllers and the mobile switching center is load-balanced.

In the same field of endeavor, Feuerstein et al. disclose communication traffic among the base transceiver stations, the base station controllers and the mobile switching center is load-balanced (see col.4 lines 3-5 and col.7 lines 19-32) for efficiency. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fletcher et al. with the above teaching of Feurerstein et al. in order to provide optimization of network parameters based on dynamic communication and network conditions such as traffic load and balancing conditions and/or changing interference conditions.

Regarding claim 16, Fletcher discloses 16 a method of providing wireless communication with a plurality of mobile stations using a cellular network including a plurality of network elements, comprising the steps of:

communicating inbound information with a mobile station over a transceiver network element (see col.18 lines 1-24);

communicating the inbound information with one of at least two base station controller network elements to further process the inbound information (see col.18 lines 1-14);

communicating the inbound information with a mobile station controller network element to further process the inbound information (see col.18 lines 1-14);

Fletcher fails to disclose network traffic among the network elements is load-balanced.

In the same field of endeavor, Feuerstein et al. disclose communication traffic among the network elements is load-balanced (see col.2 lines 37-49) for efficiency. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fletcher et al. with the above teaching of Feurerstein et al. in order to provide optimization of network parameters based on dynamic communication and network conditions such as traffic load and balancing conditions and/or changing interference conditions.

Regarding claims 12 and 18, the modified Fletcher et al. disclose communications traffic among the transceivers and the software functional blocks is

load-balanced to provide increased efficiency (see Feuerstein et al. see col.4 lines 3-5, fig.3 and col.2 lines 37-49).

Regarding claim 7, the modified Fletcher et al. disclose at least one of the plurality of RR functional block is resident on a special purpose data processing system known as a base station controller (BSC) (see Fletcher et al., col.6 lines 46-64).

Regarding claim 8, the modified Fletcher et al. disclose the data communicated between mobile stations and between a mobile station and the PSTN includes voice communication (see Fletcher et al., col.9 lines 15-24).

Regarding claim 9, the modified Fletcher et al. disclose each of the plurality of transceivers includes a transceiver and a base transceiver station software functional block resident on a data processing system coupled to the network (see Fletcher et al., col.21 lines 45-67).

Regarding claims 11 and 17, the modified Fletcher et al. disclose each of the network elements is given a predetermined network address and communication traffic is routed to each of the network elements based on the predetermined network address (see Fletcher et al., col.22 lines 39-54).

Regarding claims 13 and 19, the modified Fletcher et al. disclose if one of the network elements fails, communication traffic is routed to another network element capable of performing the required functions (see Fletcher et al., col.16 lines 29-48).

4. Claims 3-6, 14-15 and 20-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher et al. in view of in view of Feurerstein et al. (US Patent 6,141,565) and further in view of Petersen (US Patent 6,574,221).

Regarding claims 3 and 22-25, the modified Fletcher et al. disclose circuit switched networks (see col.5 lines 40-61). However Fletcher et al. fail to disclose Internet protocol networks and ATM networks.

Petersen discloses Internet protocol networks and ATM networks (see col.9 lines 2-3). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Fletcher et al. with the above teaching of Petersen in order to provide the architecture and configuration of various nodes in a mobile communications network.

Regarding claims 4-5, 14-15 and 20-21, the modified Fletcher et al. fail to disclose the network is an internet protocol network, and wherein the PSTN is coupled to the IP network via a voice gateway.

In the same field of endeavor, Feuerstein et al. disclose the network is an internet protocol network, and wherein the PSTN is coupled to the IP network via a voice gateway (see col.9 lines 1-5). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the modified Fletcher et al. with the above teaching of Petersen in order to provide the architecture and configuration of various nodes in a mobile communications network.

Regarding claim 6, the modified Fletcher et al. disclose the voice gateway software functional block, the MM functional block and the VLR functional block are

resident on a special purpose data processing system known as a mobile service center (MSC) (see Fletcher, col.23 lines 26-43).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed Tu Nguyen whose telephone number is 703-305-3427. The examiner can normally be reached on Monday through Friday from 8:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MAUNG NAY A, can be reached at (703) 308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

TN

October 8, 2004

NAY MAUNG
SUPERVISORY PATENT EXAMINER